

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N5770

NPN SILICON RF TRANSISTOR

JEDEC TO-92 CASE (EBC)

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5770 type is a NPN Silicon Epitaxial Planar Transistors designed for high frequency amplifier and oscillator applications.

MAXIMUM RATINGS (T_A = 25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V _{CB0}	30	V
Collector-Emitter Voltage	V _{CEO}	15	V
Emitter-Base Voltage	V _{EBO}	3.0	V
Collector Current	I _C	50	mA
Power Dissipation	P _D	625	mW
Operating and Storage			
Junction Temperature	T _J , T _{stg}	-65 to +150	°C
Thermal Resistance	θ _{JA}	200	°C/W

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CBO}	V _{CB} = 15V		10	nA
I _{CBO}	V _{CB} = 15V, T _A = 150°C		1.0	μA
BV _{CB0}	I _C = 1.0μA	30		V
BV _{CEO}	I _C = 3.0mA	15		V
BV _{EBO}	I _E = 10μA	3.0		V
V _{CE(SAT)}	I _C = 10mA, I _B = 1.0mA		0.4	V
V _{BE(SAT)}	I _C = 10mA, I _B = 1.0mA		1.0	V
h _{FE}	V _{CE} = 1.0V, I _C = 3.0mA	20		
h _{FE}	V _{CE} = 1.0V, I _C = 8.0mA	50	200	
f _T	V _{CE} = 10V, I _C = 8.0mA, f = 100MHz	900		MHz
C _{ob}	V _{CB} = 10V, I _E = 0, f = 1.0MHz		1.7	pF
C _{ib}	V _{EB} = 0.5V, I _C = 0, f = 1.0MHz		2.0	pF
G _{pe}	V _{CB} = 12V, I _C = 6.0mA, f = 200MHz	15		dB
P _O	V _{CB} = 15V, I _C = 8.0mA, f = 500MHz	30		mW
η	V _{CB} = 15V, I _C = 8.0mA, f = 500MHz	25		%
NF	V _{CE} = 6.0V, I _C = 1.0mA, R _G = 400Ω, f = 60MHz		6.0	dB